

## REMARKS

### IDS not of record

An information disclosure statement including a PTO 1449 form was submitted by Applicants in October of 2005. The art from that statement has not been made of record. Correction is respectfully requested.

### Claim objections

Amendments have been made to address formal issues raised by the Examiner with respect to claims 3 and 7. Applicants respectfully submit that these changes are purely pedantic in nature and do not affect the scope of the claims, or their definiteness or enablingness. Accordingly, no filewrapper estoppel should result.

### Art rejections

The art rejections are respectfully traversed.

Any of the Examiner's rejections and/or points of argument that are not addressed below would appear to be moot in view of the following. Nevertheless, Applicants reserve the right to respond to those rejections and arguments and to advance additional arguments at a later date. No arguments are waived and none of the Examiner's statements are conceded.

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### Claim 1

Claim 1 recites a discharge lamp having a reflector and cooling means. The cooling means has at least one nozzle. A flow of gas can be directed through the nozzle onto the discharge lamp. The nozzle is arranged such that it does not extend, at least to any substantial degree, into a beam path produced by the lamp and the reflector.

Against this claim, the Examiner has cited Sakugi. This reference has a single figure. The figure is somewhat exploded, in the sense that elements that normally should be sealed together are shown apart from one another, with gaps about that would not normally be present in operation. Accordingly, it is difficult to discern the actual configuration. However, it seems to Applicants, looking at this figure, that the nozzle (5, 9) is not as claimed. It appears to Applicants that the end of the nozzle extends past the surface of the reflector, substantially into the beam path. Accordingly, Applicants respectfully submit that this reference fails to teach or suggest the claimed invention.

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### Claim 3

Claim 3 recites a turbulent flow. The Examiner purports to find this in Sakugl paragraph 11. Applicants have read this paragraph and find no teaching or suggestion of turbulent flow. Applicants accordingly respectfully submit that the Examiner has failed to make a *prima facie* case against claim 3.

### Claim 4

Claim 4 recites two nozzles. The nozzles are arranged at an angle with respect to each other. The result of this configuration is that turbulent flow is produced that surrounds at least part of the lamp.

The Examiner says that two nozzles are obvious. Applicants respectfully disagree. In this case, the recitation is not merely of two nozzles, but also that they are at an angle with respect to one another; and, moreover, that this angle results in a particular flow, i.e. a turbulent flow that surrounds at least part of the lamp. This is more than just two nozzles and constitutes a patentable distinction over the art.

Applicants accordingly respectfully submit that the Examiner has failed to make a *prima facie* case against claim 4.

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### Claim 5

This claim depends from claim 4 and recites that the nozzles are at an angle of 90 degrees with respect to one another.

The Examiner purports to find this feature in Sakugi. Applicants respectfully submit that this position is contradictory. The Examiner has already admitted that Sakugi does not show two nozzles. How therefore can it teach or suggest that they are at 90 degrees with respect to one another?

Applicants therefore respectfully submit that the Examiner has failed to make a *prima facie* case against claim 5.

### Claim 7

This claim recites first and second nozzles. The first nozzle is directed at a region at the top. The second nozzle is directed at a region at the bottom.

The Examiner purports to find this obvious over Sakugi. Applicants respectfully disagree. The reference shows only a single nozzle pointing toward an exit window. The inference made by the Examiner could only be made through impermissible hindsight in light of the disclosure.

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### Claim 8

This claim recites that the velocity of flow of the gas can be controlled as a function of operating position.

The Examiner purports to find this in Sakugi. Applicants have perused the reference and are not finding this teaching. Clarification is respectfully requested. Where does the Examiner think the reference shows this feature?

### Sakugi/Kaneko

The Examiner combines these references. The cooling mechanism of Kaneko appears to extend substantially into the path of the light beam, especially at 5, such that the light output of the lamp would be affected. Applicants accordingly respectfully submit that one of ordinary skill in the art would not have combined this reference in a context of trying to keep a cooling mechanism out of the path of the light beam.

### Claim 6

This claim recites a sensor, adjacent to the nozzle, for sensing velocity and/or pressure and/or flow rate.

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The Examiner purports to find this in Kaneko (10-12587). The translation of Kaneko is incoherent. It is impossible for Applicants to understand what the reference means. The Examiner says that element 19 is a nozzle and element 25 senses a flow in that nozzle. The text says

19 – for the pipe as a cooling film and 21/ the lamp voltage monitor section, and 22, as for a circulating pump and 24, a condensator and 23 are [external lead wire and 20/ the incubation film and 21/ the lamp voltage monitor section, an operation signal circuit and 25] lamp drive circuits...lamp voltage controls cooling temperature by the condensator by detecting and calculating in the lamp voltage monitor section 24

Applicants understand from this that cooling temperature is controlled by temperature of the coolant, not by flow – though they cannot be quite certain. Applicants accordingly respectfully submit that the Examiner has not made a *prima facie* case here.

### Claim 9

This claim recites controlling the velocity of flow as a function of position.

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The Examiner purports to find this feature in Kaneko. Applicants have perused Kaneko, as best they can in view of the awkward translation. They do not find that cooling varies with position. Instead, cooling seems to vary with time of operation per paragraph 0021, line 4.

### New claims

New claims 10-15 have been added. These claims recite more details of the configuration of the nozzle or nozzles, details not taught or suggested in the references. Applicants respectfully submit that these claims distinguish even more clearly over the references than those already discussed.

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## REMARKS

Applicants respectfully submit that they have addressed each issue raised by the Examiner — except for any that were skipped as moot — and that the application is accordingly in condition for allowance. Allowance is therefore respectfully requested.

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Date of printing: September 9, 2006

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